

REMARKS

Applicant thanks the Examiner for the careful consideration given to this application. Reconsideration is now respectfully requested in view of the amendments above and the following remarks.

Claims 1-15 are pending in this application. Claims 4, 5, 8, 9, 12, and 13 are independent claims. Claims 2-15 are amended. Claim 1 is cancelled without prejudice or disclaimer, and Claims 16-18 were previously cancelled without prejudice or disclaimer. Reconsideration and allowance of the present application are respectfully requested.

Allowable Subject Matter

Applicant notes with appreciation the Examiner's indication that claim 8 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has elected to amend Claim 8 to make it independent, and therefore, it is respectfully submitted that Claim 8 is now in condition for allowance.

Claim Rejections Under 35 U.S.C. §103

Claims 1-4, 6, 9-12 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over "Peak-to-Average Power Reduction in High-Performance, High-Throughput OFDM Via Pseudo-Orthogonal Carrier-Interferometry Coding" to Wiegandt et al. (hereinafter "Wiegandt et al."), in view of U.S. Patent No. 6,359,923 to Agee et al. (hereinafter "Agee et al."). Claims 5, 7 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wiegandt in view of Agee et al., as applied to Claims 1 and 6 (it is presumed that the Office Action intended to say, "9," instead of "6") above, and in further view of U.S. Patent Publication No. 2003/0103445 to Steer et al. (hereinafter "Steer et al."). Claim 15 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Wiegandt in view of Agee et al., as applied to Claims 1 and 9 above, and in further view of U.S. Patent No. 6,801,580 to Kadous (hereinafter "Kadous"). Claim 1 has been cancelled, thus rendering moot its rejection. The remaining rejections are respectfully traversed for at least the following reasons.

Claims 4, 5, 12, and 13 have now been amended to be independent claims, and Claim 9 has been amended to incorporate the elements of Claim 8, indicated as containing allowable subject matter. Claims 2, 3, 6, 7, 10, 11, 14, and 15 now depend from one or more of the current independent claims.

As noted above, Claim 9 now includes the elements of allowable Claim 8. For at least this reason, it is respectfully submitted that Claim 9 is in condition for allowance and that the rejection of Claim 9 should be withdrawn.

Attention is now directed to independent Claims 4 and 12. Claim 4 recites, “at least one of the modulator or the CI coder is adapted to scramble CI codes generated by the CI coder,” and Claim 12 recites, “at least one of the demodulator or the CI decoder is adapted to descramble CI codes.” The Office Action, at page 4, relies on Agee et al. for a teaching of “applying spreading codes to the encoded data generated by an encoder.” However, applying a *spreading code* is not the same as *scrambling* (and similarly for descrambling). Spreading implies increasing bandwidth, while scrambling carries no such implication (for example, scrambling may be accomplished by merely changing order). Therefore, even if Agee et al. does teach applying spreading codes, this does not mean that Agee et al. teaches scrambling. Therefore, it is respectfully submitted that Claims 4 and 12 (and their dependent claims) are allowable over the cited references.

Attention is now directed to Claims 5 and 13. Claim 5 recites, “at least one of the modulator or the CI coder is adapted to provide intentional frequency variations to the subcarriers,” and Claim 13, as amended, recites, “at least one of the demodulator or the CI decoder is adapted to compensate at least one signal based on the data-bearing CI code vector on the plurality of subcarriers for subcarrier frequency variations intentionally imparted to one or more of the subcarriers by a transmitter.” In other words, Claims 5 and 13 now specifically recite that the frequency variations under discussion in those claims are intentionally provided/imparted. The Office Action, at page 4, relies on Steer et al. for a teaching of the imparting of such frequency variations to subcarriers, specifically referring to paragraph 74 of Steer et al. (the Office Action acknowledges that the other cited references fail to disclose or suggest this). Steer et al., at paragraph 74, states,

To assist in the symbol timing and frequency control, the base station 102 may include in its transmissions a set of pilot sub-carriers. The symbol and timing frequency controller 532 may detect a frequency shift by searching for the locations of the pilot sub-carriers and adjust the frequencies of the locally transmitted sub-carriers to correct the offset.

Steer et al., paragraph 74, lines 1-7. This portion of Steer et al. is addressing a question of *correcting a frequency offset*. In other words, in Steer et al., the receiver uses *received* pilot sub-carriers to determine a frequency offset to be applied to *transmitted* signals to correct for frequency offsets introduced during transmission. That is, this is a technique by which a transceiver may accomplish frequency offset compensation by means of offset measurement and pre-compensation. This has nothing to do with providing or compensating for *intentionally-introduced frequency variations*, as in Claims 5 and 13. Furthermore, regarding Claim 13, there is no compensation regarding a quantity based on a received signal (e.g., the claimed “at least one signal based on the data-bearing CI code vector on the plurality of subcarriers”); Steer et al. is limited to applying an adjustment to a signal to be transmitted, based on offsets determined from a signal received by the collocated receiver. For at least these reasons, it is respectfully submitted that Claims 5 and 13 are allowable over the cited references.

Disclaimer

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Office Action. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

CONCLUSION

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

The Office is authorized to charge any necessary fees to Deposit Account No. 22-0185.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 27592-00404-US3 from which the undersigned is authorized to draw.

Dated: October 22, 2009

Respectfully submitted,

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